WHAT IS CLAIMED IS:

1   1.   A method comprising:

2   establishing a communication path between a mobile-device

3   in a first-communication-area and a server through a home-

4   device; and

5   maintaining the communication path through the home-

6   device when the mobile-device moves to a second-communication-

7   area.

1   2.   The method of claim 1 including using respective program

2   layers below transmission control protocol/internet protocol

3   (TCP/IP) program layers in the mobile-device and the home-

4   device to establish the communication path and maintain the

5   communication path.

1   3.   The method of claim 1 including maintaining the

2   communication path through the mobile-device when moving from

3   the first-communication-area associated with a first-subnet to

4   a second-communication-area associated with a second-subnet.

1   4.   The method of claim 1 comprising:

2   assigning a home-address associated with the home-device

3   to the mobile-device;

4   assigning a first-real-address associated with a first-

5   communication-area to the mobile-device; and

6   detecting the mobile-device's movement into the second-

7   communication-area.

1   5.   The method of claim 4 including assigning a second-real-

2   address associated with the second-communication-area to the

3   mobile-device.

1   6.   The method of claim 5 including generating the first-

2   real-address and the second-real-addresses from a server using

3   dynamic host configuration protocol (DHCP).

1   7.   The method of claim 4 including maintaining the

2   communication path when the mobile-device moves from the

3   first-communication-area associated with a first-subnet to the

4   second-communication-area associated with a second-subnet.

1   8.   The method of claim 4 including detecting movement into

2   the second-communication-area is performed by the mobile-

3   device.

1   9.   A method comprising:

2   generating a request from a mobile-device, the request

3   comprising a request-layer including a home-address of the

4   mobile-device and a server-address;

5   encapsulating the request-layer with a roaming-layer

6   including a real-address of the mobile-device and a home-

7   device-address; and

8   communicating the encapsulated request-layer to a home-

9   device based on the home-device-address.

1   10. The method of claim 9 comprising:

2   removing the roaming-layer from the encapsulated request-

3   layer; and

4   communicating the request-layer from the home-device to a

5   server based on the server-address.

1   11. The method of claim 10 comprising:

2   generating a response to the request from the home-device

3   to the server, the response including a response-layer having

4   the server-address and the home-device-address; and

5   communicating the response to the home-device.

1   12. The method of claim 11 further comprising:

2   encapsulating the response with a roaming-layer,

3   including the real-address and the home-address of the mobile-

4   device; and

5   communicating the encapsulated response to the mobile-

6   device.

1   13. The method of claim 9 including using a program layer

2   below a transmission control protocol/internet protocol

3   (TCP/IP) program layer in the mobile-device to generate the

4 request, encapsulate the request-layer and communicate the

5 encapsulated request-layer.

1 14. The method of claim 9 including using a program layer

2 below a transmission control protocol/internet protocol

3 (TCP/IP) program layer in the home-device to modify the

4 encapsulated request-layer with the roaming-layer and

5 communicate the request-layer.

1 15. A communication system comprising:

2 a home-device;

3 a server; and

4 a mobile-device including a processor configured to:

5 generate a request from the mobile-device, the request

6 comprising a request-layer including a home-address of the

7 mobile-device and a server-address of the server,

8 encapsulate the request-layer with a roaming-layer

9 including a real-address of the mobile-device and a home-

10 device-address, and

11 communicate the encapsulated request-layer to the

12 home-device based on the home-device-address.

1 16. The system of claim 15 wherein the home-device includes a

2 processor configured to remove the roaming-layer from the

3 encapsulated request-layer and communicate the request-layer

4 from the home-device to the server based on the server-

5 address.

1 17. The system of claim 15 wherein the home-device includes a

2 processor configured to:

3   encapsulate a response with a roaming-layer, including

4 the real-address and the home-address of the mobile-device and

5   communicate the encapsulated response to the mobile-

6 device.

1 18. A mobile-device comprising:

2   a network-interface-adapter; and

3   a processor configured to:

4   generate a request comprising a request-layer

5 including a home-address of the mobile-device and a server-

6 address,

7   encapsulate the request-layer with a roaming-layer

8 including a real-address of the mobile-device and a home-

9 device-address, and

10   communicate the encapsulated request-layer through the

11 network-interface-adapter to a home-agent based on the home-

12 device-address.

13   .

1 19. The mobile-device of claim 18 including memory having a

2 program layer below a transmission control protocol/internet

3   protocol (TCP/IP) stack, the program layer storing

4   instructions for causing the processor to generate the

5   request, encapsulate the request, and communicate the

6   encapsulated request-layer to the home agent.

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1   20.   A home-agent comprising:

2   a network-interface-adapter; and

3   a processor configured to:

4   receive a request-layer encapsulated with a roaming

5   layer, the request-layer including a server address,

6   remove the roaming-layer from the encapsulated

7   request-layer, and

8   communicate the request-layer through the network-

9   interface-adapter to a server based on the server-address.

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1   21.   The home-agent of claim 20, the processor configured to:

2   receive a response from the server;

3   encapsulate the response with a roaming-layer including a

4   real-address and a home-address of the mobile-device, and

5   communicate the encapsulated response to the mobile-

6   device.

1   22.   The home agent of claim 20 including memory having a

2   program layer below a transmission control protocol/internet

3 protocol (TCP/IP) stack, the program layer storing

4 instructions for causing the processor to encapsulate the

5 response and communicate the encapsulated response.

1 23. An article comprising a computer-readable medium that

2 stores computer-executable instructions for causing a computer

3 system to:

4   assign a home-address associated with a home-device to a

5 mobile-device;

6   assign a first-real-address associated with a first-

7 communication-area to the mobile-device; and

8   detect movement of the mobile-device into a second-

9 communication-area.

1 24. The article of claim 23 including instructions for

2 causing the computer system to assign a second-real-address

3 associated with the second-communication-area to the mobile-

4 device.

1 25. An article comprising a computer-readable medium that

2 stores computer-executable instructions for causing a computer

3 system to:

4   generate a request from a mobile-device, the request

5 comprising a request-layer including a home-address of the

6 mobile-device and a server-address;

7   encapsulate the request-layer with a roaming-layer

8   including a real-address of the mobile-device and a home-

9   device-address; and

10   communicate the encapsulated request-layer to a home-

11   device based on the home-device-address.

1   26.   The article of claim 25 including instructions for

2   causing the computer system to:

3   remove the roaming-layer from the encapsulated request-

4   layer; and

5   communicate the request-layer from the home-device to a

6   server based on the server-address.

1   27.   The article of claim 25 including instructions to:

2   generate a response to the request from the home-device

3   to a server, the response including a response-layer

4   containing the server-address and the home-device-address; and

5   communicate the response to the home-device.

1   28.   The article of claim 25 including instructions to:

2   encapsulate the response with a roaming-layer including

3   the real-address and the home-address of the mobile-device;

4   and

5   communicate the encapsulated response to the mobile-

6   device.